

**REMARKS**

Claims 1-18 are pending in the present application with Claims 1, 3, 6, 10, 12 and 15 as independent claims. Claims 8 and 17 are cancelled without prejudice. In the Office Action, the Examiner rejected the claims as follows. Claims 6 and 15 are rejected under 35 U.S.C. §102(e) as being anticipated by Mody et al. (U.S. Pub. No. 2002/0181390). Claims 1, 3, 5, 9, 10, 12, 14 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mody in view of Admitted Prior Art (APA).

Reconsideration of the application is respectfully requested.

It is gratefully acknowledged that the Examiner maintained the objection to Claims 2, 4, 7-8, 11, 13, 16 and 17 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

In the Response to Arguments on page 2 of the Office Action, the Examiner contends that Mody et al. discloses that in typical communication systems, training symbols or preambles at the beginning of data frames are usually added as a prefix to the data symbols. The training symbols in SISO systems are used to provide synchronization of the received signals with respect to the transmitted signals as well as to provide channel parameter estimation. This process is disclosed in Mody. However, the present invention claims a totally different recitation. More particularly, the present invention claims “a first preamble generator for generating a first preamble for synchronization using an aperiodic sequence with an aperiodic correlation property and a second preamble generator for generating a second preamble for channel estimation using the aperiodic sequence.” The phrases “a first preamble generator for generating a first preamble for synchronization” and “a second preamble generator for generating a second preamble for channel estimation” cannot be considered in isolation. The limitations must be considered in their entirety. In addition, it appears the Examiner does not accord any patentable weight to the phrase “using an aperiodic sequence with an aperiodic correlation

property” and “using the aperiodic sequence” within the context of the claim. In so doing, it is implied that certain language of the limitation is not limiting. The Examiner tacitly acknowledges that certain language failed to make a meaningful contribution to the claimed invention. All words in a claim must be considered in judging the patentability of that claim against the prior art. See MPEP §2143.03. One cannot divine claim meaning in a vacuum. *Philips v. AWH Corporation* (Fed. Cir. July 12, 2005).

Second, Mody merely uses a periodic sequence such as CAZAC sequence, as a preamble, whereas the present invention discloses that the preamble is divided into two distinct preambles according to the following two embodiments. In the first embodiment, the preamble consists of a first preamble (an aperiodic sequence) + a second preamble (an aperiodic sequence); and in the second embodiment, the second preamble consists of a first preamble (an aperiodic sequence) + a second preamble (a periodic sequence).

Mody only uses the periodic sequence as the preamble, whereas Claim 1 of the present invention recites the aperiodic sequence as the first preamble.

Furthermore, the Examiner acknowledges that Mody does not specifically mention the difference between training symbols/preambles by “first” and “second”. (See Office Action, page 3). At the very least, Mody does not teach the above limitations. Accordingly, *Mody* neither anticipates Claims 6 and 15 (nor renders Claims 1, 3, 10 and 12 obvious) because as recited in MPEP 706.02(IV), “for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly.” Withdrawal of the rejection is respectfully requested.

Further to the §103(a) rejection of Claims 1, 3, 10 and 12 as being unpatentable over Mody in view of Admitted Prior Art (APA), the proposed combination of Mody’s disclosure with APA merely uses the periodic sequence as a preamble, but it does not teach or suggest the claimed invention that uses the aperiodic sequence as the first preamble and the aperiodic or periodic sequence as the second preamble. The APA does not cure the deficiencies of Mody.

To establish a prima facie case of obviousness under 35 U.S.C. §103(a) based upon a

combination of references, the cited combination of references must disclose, teach or suggest all elements/features/steps of the claim at issue. *See, e.g., In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881(C.C.P.A. 1981). All of the claimed features of independent Claims 1, 3, 10 and 12 are not taught or suggested by the combination of *Mody* and Admitted Prior Art or by either reference alone. Accordingly, the Examiner fails to establish a prima facie case of obviousness with respect to Claims 1, 3, 10 and 12. Withdrawal of the rejection is respectfully requested.

Claim 2 inherits the limitations of Claim 1 from which it depends and therefore, contains all the elements of Claim 1. Claim 2 is distinguishable from *Mody* in the same manner as Claim 1.

Since Claims 4-5 depend from and inherit all the elements of Claim 3, Claims 4-5 should be held distinguishable from *Mody* and the APA in the same manner as Claim 3.

Claim 7 inherits the limitations of Claim 6 from which they depend and therefore, contains all the elements of Claim 6. Claim 7 is distinguishable from *Mody* in the same manner as Claim 6.

Claim 11 inherits the limitations of Claim 10 from which it depends and therefore, contains all the elements of Claim 10. Claim 11 is distinguishable from *Mody* and the APA in the same manner as Claim 1.

Since Claims 13-14 depend from and inherit all the elements of Claim 12, Claims 13-14 should be held distinguishable from *Mody* and the APA in the same manner as Claim 12.

Claims 16 and 18 inherit the limitations of Claim 15 from which they depend and therefore, contain all the elements of Claim 15. Claims 16 and 18 are distinguishable from *Mody* in the same manner as Claim 15.

Accordingly, it is believed that independent Claims 1, 3, 6, 10, 12 and 15 are in condition

for allowance. Without conceding the patentability *per se* of the dependent claims, they are also believed to be in condition for allowance for at least the above reasons. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of Claims 1-7, 9-16 and 18.

Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicants' attorney at the number given below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul J. Farrell", is written over a horizontal line.

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